

## CLAIMS

What is claimed is:

- 1 1. A method of determining compliance with at least one  
2 service level agreement requirement, the method comprising the  
3 steps of:  
4 receiving operational data from a service provider by an  
5 agent not related to the service provider; and  
6 comparing the received operational data to at least one  
7 service level agreement requirement to determine compliance with  
8 at least one service level agreement requirement.
- 1 2. The method of claim 1 further comprising, before the  
2 receiving step, the step of requesting, by the agent, the  
3 operational data from the service provider.
- 1 3. The method of claim 1 wherein the step of receiving  
2 operational data comprises receiving performance data indicative  
3 of a performance level of a contracted for service provided by  
4 the service provider to a customer.
- 1 4. The method of claim 3 wherein the performance data comprise  
2 data indicative of the availability of a server adapted to  
3 provide a contracted for service to a customer of the service  
4 provider.

1 5. The method of claim 3 wherein the performance data  
2 comprises data indicative of a bandwidth level provided by the  
3 service provider to a customer.

1 6. The method of claim 3 wherein the performance data  
2 comprises data indicative of a response time to fulfill a  
3 request by a customer for a contracted for service.

1 7. The method of claim 1 wherein the service provider is at  
2 least one of an application service provider, an internet  
3 service provider, a hosting provider, a commerce service  
4 provider, a content service provider, a network service  
5 provider, a security service provider, a storage service  
6 provider, vertical service provider, or a wireless service  
7 provider.

1 8. The method of claim 1 wherein the step of comparing  
2 comprises:

3 filtering the received operational data; and  
4 comparing the filtered operational data to the at least one  
5 service level agreement requirement to determine compliance with  
6 the service level agreement requirement.

1 9. The method of claim 8 further comprising storing the  
2 filtered operational data.

1 10. The method of claim 9 wherein the step of comparing  
2 comprises:

3        incorporating the filtered operational data with the stored  
4 operational data; and

5        comparing the incorporated operational data to the at least  
6 one service level agreement requirement to determine compliance  
7 with the service level agreement requirement.

1    11. The method of claim 1 wherein the step of comparing the  
2 received operational data comprises:

3        deriving episode data in response to the received  
4 operational data;

5        deriving at least one fact relevant to the at least one  
6 service level agreement requirement in response to the episode  
7 data; and

8        determining compliance with the service level agreement  
9 requirement in response to the derived at least one fact.

1    12. The method of claim 1 wherein the service provider  
2 comprises a database, the database comprises data from at least  
3 one of an enterprise management system, a network management  
4 system and an application management system.

1    13. The method of claim 12 wherein the receiving step comprises  
2 receiving operational data comprising events logged by the at  
3 least one of the enterprise management system, network  
4 management system and application management system.

1 14. The method of claim 1 wherein the agent comprises stand-  
2 alone hardware running a secure software program controlled by a  
3 party other than the service provider.

1 15. The method of claim 1 wherein the agent is controlled by a  
2 party not related to the service level agreement.

1 16. The method of claim 1 wherein the at least one service  
2 level agreement requirement is derived from at least one term of  
3 a service level agreement.

1 17. The method of claim 1 wherein the at least one service  
2 level agreement requirement comprises all of the terms of a  
3 service level agreement.

1 18. The method of claim 1 wherein the at least one service  
2 level agreement requirement comprises at least one service level  
3 guarantee.

1 19. The method of claim 1 wherein the at least one service  
2 level agreement requirement comprises at least one service level  
3 objective.

1 20. A method of determining compliance with a service level  
2 agreement requirement, the method comprising the steps of:

3 receiving a first set of operational data from a service  
4 provider;

5 receiving a second set of operational data from a customer;

6 and

7 comparing the first received set of operational data and  
8 the second received set of operational data to at least one  
9 service level agreement requirement to determine compliance with  
10 the at least one service level agreement requirement.

1 21. The method of claim 20, wherein the step of comparing the  
2 received operational data comprises, for each of the first set  
3 of operational data and the second set of operational data:

4 identifying at least one time period interval relevant to  
5 the at least one term in an agreement for service between a  
6 customer and the service provider;

7 deriving episode data in response to the respective  
8 received operational data;

9 deriving at least one fact relevant to the at least one  
10 term in the agreement for service in response to the episode  
11 data and in response to the identified at least one time period  
12 interval relevant to the agreement for service; and

13 determining compliance of the service provider to the at  
14 least one term in the agreement for service in response to the  
15 derived at least one fact.

1 22. A method of determining compliance with a service level  
2 agreement requirement, the method comprising the steps of:

3 receiving a first set of operational data from a service  
4 provider;

5 receiving a second set of operational data from a customer;  
6 receiving a third set of operational data from a third-  
7 party; and  
8 comparing the first received set of operational data, the  
9 second received set of operational data, and the third received  
10 set of operational data to at least one service level agreement  
11 requirement to determine compliance with the at least one  
12 service level agreement requirement.

1 23. The method of claim 22, wherein the step of comparing the  
2 received operational data comprises, for each set of operational  
3 data:

4 identifying at least one time period interval relevant to  
5 the at least one term in an agreement for service between a  
6 customer and the service provider;

7 deriving episode data in response to the respective  
8 received operational data;

9 deriving at least one fact relevant to the at least one  
10 term in the agreement for service in response to the episode  
11 data and in response to the identified at least one time period  
12 interval relevant to the agreement for service; and

13 determining compliance of the service provider to the at  
14 least one term in the agreement for service in response to the  
15 derived at least one fact.

1 24. A system for determining compliance with a service level  
2 agreement comprising;  
3 a first agent in communication with a service provider, the  
4 first agent comprising software running on a stand-alone  
5 computer for obtaining operational data from the service  
6 provider;  
7 a first receiver in communication with the first agent, the  
8 first receiver receiving the operational data from the first  
9 agent; and  
10 an analyzer in communication with the first receiver, the  
11 analyzer extracting data corresponding to at least one service  
12 level agreement requirement from the received operational data,  
13 refining the extracted data to generate a service level data set  
14 related to at least one requirement of the service level  
15 agreement, and comparing the service level data set at least one  
16 requirement of the service level agreement thereby determining  
17 compliance with the service level agreement.

1 25. The system of claim 24 further comprising:  
2 a second agent in communication with a customer, the second  
3 agent comprising software running on a stand-alone computer for  
4 obtaining operational data from the customer data source; and  
5 a second receiver in communication with the second agent  
6 and the analyzer, the second receiver receiving data stored in  
7 the customer data source from the second agent.

1 26. The system of claim 25 wherein the first receiver and the  
2 second receiver are the same receiver.

1 27. The system of claim 25 further comprising:

2        a third agent in communication with a third-party, the  
3        third agent comprising software running on a stand-alone  
4        computer for obtaining operational data from the third party;  
5        and

6       a third receiver in communication with the third agent and  
7       the analyzer, the third receiver receiving data from the third-  
8       party data source.

1 28. The system of claim 27 wherein the third receiver is the  
2 same as at least one of the first receiver and the second  
3 receiver.

1 29. The system of claim 24 further comprising a cache in  
2 communication with the first receiver, wherein the cache stores  
3 the received operational data.

1 30. The system of claim 24 wherein the analyzer comprises;

2        a quantizer in communication with the first receiver, the  
3        quantizer for extracting data corresponding to service level  
4        agreement requirements from the received operational data for  
5        refining the extracted data to generate a service level data set  
6        related to a portion of requirements of the service level  
7        agreement, and for comparing the service level data set to the



8 portion of the requirements of the service level agreement to  
9 determine compliance with the service level agreement; and  
10 a data warehouse in communication with the quantizer, the  
11 data warehouse for storing at least the service level data set  
12 and comparing a plurality of stored service level data sets to  
13 the portion of the requirements of the service level agreement  
14 to determine compliance with the service level agreement.

1 31. The system of claim 24 further comprising a reporting  
2 module in communication with the data warehouse, wherein the  
3 reporting module generates reports in response to customer  
4 requests.

1 32. The system of claim 24 wherein the service provider  
2 comprises a database, and the wherein the first agent is in  
3 communication with the database.

1 33. A method for determining compliance with at least one term  
2 of an agreement for service between a customer and a service  
3 provider, the method comprising the steps of:

4 a. receiving operational event data related to performance  
5 of a service by a service provider;

6 b. identifying at least one time period interval relevant  
7 to the at least one term in an agreement for service between a  
8 customer and the service provider;

9 c. deriving episode data in response to the received  
10 operational event data;  
11 d. deriving at least one fact relevant to the at least one  
12 term in the agreement for service in response to the episode  
13 data and in response to the identified at least one time period  
14 interval relevant to the agreement for service; and  
15 e. determining compliance of the service provider to the  
16 at least one term in the agreement for service in response to  
17 the derived at least one fact.

1 34. The method of claim 33 wherein the operational event data  
2 is generated by the system of the service provider.

1 35. The method of claim 33 wherein the operational event data  
2 is generated by the customer of the system of the service  
3 provider.

1 36. The method of claim 33 wherein the operational event data  
2 is generated by a computer that belongs to neither the service  
3 provider nor the customer.

1 37. The method of claim 33 wherein the operational event data  
2 comprises a list of events.

1 38. The method of claim 33 wherein the time period interval  
2 relevant to the at least one term in an agreement for service is  
3 identified automatically from the at least one term in the  
4 agreement for service.

1 39. The method of claim 33 wherein the determined episode data  
2 comprises a list of time periods in which a level of service was  
3 provided.

1 40. The method of claim 33 wherein the step of deriving facts  
2 relevant to the at least one term in the agreement for service  
3 comprises sampling the episode data at the identified at least  
4 one time period relevant to the agreement for service.

1 41. The method of claim 40 wherein the step of deriving facts  
2 relevant to the at least one term in the agreement for service  
3 comprises sampling the episode data such that an aggregation of  
4 facts are used to derive the episode data.

1 42. The method of claim 33 further comprising the step of:  
2 f. notifying a user of the determined compliance of the  
3 service provider to the at least one term in the agreement.

1 43. The method of claim 42 wherein the user is associated with  
2 a party to the service level agreement.

1 44. The method of claim 43 wherein the user is representative  
2 of the customer.

1 45. The method of claim 43 wherein the user is representative  
2 of the service provider.

1 46. The method of claim 33, wherein the at least one term of  
2 the agreement comprise the service requirements of a service

3 agreement, and wherein the at least one time period is the time  
4 periods relevant to the service requirements.